

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

<b>Applicant(s):</b>	Richard W. Ragan, Jr., <i>et al.</i>	<b>Conf. No.:</b>	2496
<b>Serial No.:</b>	10/621,289	<b>Art. Unit:</b>	2179
<b>Filed:</b>	July 17, 2003	<b>Examiner:</b>	Steven B. Theriault
<b>Docket No.:</b> RSW920030060US1 (IBMR-0035)			

**Title: METHOD, SYSTEM, AND PROGRAM PRODUCT FOR  
CUSTOMIZING A USER INTERFACE**

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**DECLARATION UNDER 37 C.F.R. 1.131**

We, the Applicants in the above-identified patent application, declare as follows:

1. That we are the inventors of the subject matter described and claimed in the above-identified patent application.

2. That prior to August 19, 2002, we conceived of a method of automatically customizing a user interface, the method comprising:

identifying a user of the user interface;

displaying an object within the user interface; and

displaying a plurality of shortcuts for the object automatically adjusted based on the user and a history of object operations performed by the user to manage the object, wherein at least one shortcut of the plurality of shortcuts comprises a control for managing data in an application.

3. That prior to August 19, 2002, we conceived of a method of automatically customizing a user interface, the method comprising:

identifying a user of the user interface;

displaying an object within the user interface, wherein the object has an object attribute;

recording object operations that are performed by the user on the object to manage the object in a history of object operations; and

displaying a plurality of shortcuts for the object automatically adjusted based on the user, the object attribute, and the history of object operations, wherein at least one shortcut of the plurality of shortcuts comprises a control for managing data in an application.

4. That prior to August 19, 2002, we conceived of a system for automatically customizing a user interface, the system comprising:

an identification system for identifying a user of the user interface;

a display system for displaying an object in the user interface;

a recording system for recording object operations that are selected by the user, wherein the object operations manage the object; and

a customization system for displaying a plurality of shortcuts for an object operation automatically adjusted based on the recorded object operations and the object, wherein at least one shortcut of the plurality of shortcuts comprises a control for managing data in an application.

5. That prior to August 19, 2002, we conceived of a computer-readable medium storing computer instructions, which when executed, enables a computer system to generate an automatically customized user interface, the computer instructions comprising:

identifying a user of the user interface;

displaying an object in the user interface;

recording object operations that are selected by the user, wherein the object operations manage the object; and

displaying a plurality of shortcuts for an object operation automatically adjusted based on the recorded object operations and the user, wherein at least one shortcut of the plurality of shortcuts comprises a control for managing data in an application.

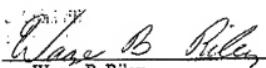
6. That the present invention is described in the Disclosure of Invention ("Exhibit A"), entitled "Disclosure RSW8-2002-0343," which was created by Wayne Riley on August 19, 2002, and submitted to the IBM Corporation Patent Department on August 19, 2002 at 10:38:57 AM MDT. Specifically, Exhibit A describes a method of automatically customizing a user interface (*see generally*, p. 2, "Main Idea"), the method comprising: identifying a user of the user interface (p. 2, lines 16-17 and figure; p. 3, lines 2-6); displaying an object within the user interface (p. 2, lines 9-11 and figure); and displaying a plurality of shortcuts for the object automatically adjusted (*id.*) based on the user and a history of object operations performed by the user to manage the object (p. 3, lines 4-6), wherein at least one shortcut of the plurality of shortcuts comprises a control for managing data in an application (p. 2, line 11).

7. That the time and date stamps appearing in Exhibit A was automatically generated by IBM Corporation's archival system, and has not been, and can not be, manually input, modified, edited, or changed in any way.

8. That, subsequent to the conception of the invention, and up until the patent application filing date of July 17, 2003, we diligently and actively assisted the IBM Corporation Patent Department in the planning, preparation, review, and filing of the above-identified patent application.

Declarants further state that the above statements made of the declarants' own knowledge are true, and that all statements made on information and belief are believed to be true. Declarant makes the above statements with the knowledge that willful false statements and the like are punishable by fine and/or imprisonment, or both, under § 1001 of Title 18 of the United States Code, and that any such willful false statement may jeopardize the validity of this application or any patent resulting therefrom.

Date: 7/9/2008

  
Wayne B. Riley

Date: \_\_\_\_\_

Richard W. Ragan, Jr. \_\_\_\_\_

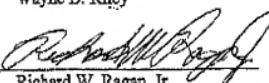
7. That the time and date stamps appearing in Exhibit A was automatically generated by IBM Corporation's archival system, and has not been, and can not be, manually input, modified, edited, or changed in any way.

8. That, subsequent to the conception of the invention, and up until the patent application filing date of July 17, 2003, we diligently and actively assisted the IBM Corporation Patent Department in the planning, preparation, review, and filing of the above-identified patent application.

Declarants further state that the above statements made of the declarants' own knowledge are true, and that all statements made on information and belief are believed to be true. Declarant makes the above statements with the knowledge that willful false statements and the like are punishable by fine and/or imprisonment, or both, under § 1001 of Title 18 of the United States Code, and that any such willful false statement may jeopardize the validity of this application or any patent resulting therefrom.

Date: July 9, 2008

Wayne B. Riley

  
Richard W. Ragan, Jr.

$$\text{prob} \left( \frac{\partial \hat{y}_i}{\partial x_j} \right) > 0$$

10

## EXHIBIT A

$$p = \frac{e^{\beta_0 + \beta_1 x}}{1 + e^{\beta_0 + \beta_1 x}}$$

11

$$= \frac{e^{\beta_0 + \beta_1 x}}{1 + e^{\beta_0 + \beta_1 x}}$$

12

## Disclosure RSW8-2002-0343

Prepared for and/or by an IBM Attorney - IBM Confidential

Created By: Wayne Riley    Created On: 08/19/2002 10:04:34 AM  
Last Modified By: Wayne Riley    Last Modified On: 08/20/2002 09:44:36 AM

Required fields are marked with the asterisk (\*) and must be filled in to complete the form.

### \*Title of disclosure (In English)

Adaptive User Action Buttons

### Summary

Status	Under Evaluation
Final Deadline	
Final Deadline	
Reason	
Processing Location RSW	
Functional Area	(RSW) Tivoli Systems
Attorney/	
Patent Professional	
IDT Team	
Submitted Date	08/19/2002 10:38:57 AM MDT
*Owning Division	TIV
Incentive Program	
Lab	
Technology Code	
PVT Score	

### Inventors with a Blue Pages entry

Inventors: Wayne Riley/Raleigh/IBM, Rick Regan/Austin/IBM

Inventor Name	Inventor Serial	Div/Dept	Inventor Phone	Manager Name
> Riley, Wayne B.				
> Regan, Rick				

> denotes primary contact

### Inventors without a Blue Pages entry

### IDT Selection

Attorney/Patent Professional: [REDACTED]

IDT Team: [REDACTED]

Response Due to IP&L: 09/20/2002

**\*Main Idea**

1. Describe your invention, stating the problem solved (if appropriate), and indicating the advantages of using the invention.

This invention allows User Interface software to keep track of and surface to the user the most frequently accessed software actions in a UI location convenient for the user. As the user interacts with the program, the program records the actions a user performs in a particular function and against a particular object. If this is the first time an action is performed, the action is recorded and given a weight of zero. Each subsequent time the action is performed the weight of the action is increased by one. The most frequently used actions are then rendered as buttons, or toolbar icons. In the figure below the actions are rendered as buttons over the table of resources, e.g., "Show cause," "Business Impact," and "Properties". As the user selects different actions over the life time of the application, the application builds an intelligent weighted list that surfaces the actions the user most frequently accesses. The application learns what the user does as they utilize the application. Should a user's job change and they begin to utilize different options/actions in the software, the interface will automatically adjust to the users new use of the software. The action buttons would change functions, but the location would remain. The user would still interact with the same "place" in the UI to perform their frequent activities.

The screenshot shows a Microsoft Internet Explorer window titled "TBSM V2.2 WC -- Microsoft Internet Explorer". The address bar displays "My Work Business Systems View <name>". The main content area has a title bar "Show cause Business Impact Properties". Below the title bar is a toolbar with icons for Print, Copy, Paste, Cut, Undo, Redo, Search, and Go. A table titled "Actions" is displayed, showing the following data:

Select	Name	Action State	Current State	Type	Owned
<input type="checkbox"/>	BS: SNA Net	<span style="color: green;">Green</span>	Unknown	Business System	
<input type="checkbox"/>	BS: Payroll	<span style="color: red;">Red</span>	Unknown	Business System	
<input type="checkbox"/>	BS: DB2-DB2	<span style="color: green;">Green</span>	Unknown	Business System	
<input type="checkbox"/>	BS: Development	<span style="color: red;">Red</span>	Unknown	Business System	
<input type="checkbox"/>	BS: Marketing	<span style="color: green;">Green</span>	Unknown	Business System	
<input type="checkbox"/>	BS: SW Region	<span style="color: green;">Green</span>	Unknown	Business System	
<input type="checkbox"/>	BS: SW Region	<span style="color: green;">Green</span>	Unknown	Business System	

At the bottom of the table, there are buttons for "Print", "Copy", "Paste", "Cut", "Go", "Total 10 Returned", "0 Declined", and "0 Selected". The status bar at the bottom left shows "Last Update: 03/25/2002 12:01:33 PM".

2. How does the invention solve the problem or achieve an advantage,(a description of "the invention",

including figures [inline as appropriate])?

The problem solved is that most UIs don't learn anything from the person using the software. Each time someone uses the program, the program treats the user as if it's the first time they have used the software. This invention allows the UI to learn what actions the user most often does in a particular view or with a specific type of resource and present those actions to the user where they can be easily seen and quickly exercised. There is no manual configuration of the UI required to get frequently used actions exposed.

3. If the same advantage or problem has been identified by others (inside/outside IBM), how have those others solved it and does your solution differ and why is it better?  
[REDACTED]

Typically, filtering a static list of all available actions within a menu bar structure leaves the user wondering what is missing from the list. The advantage of the solution of this patent is to show the user only the actions most frequently used immediately adjacent to the object being acted upon. This is the best of both worlds, a) the user can return to their drop down list for the static list of all available actions, and b) they can see the pushbuttons that show their most frequently used actions. When both techniques, the static list (a) and the most frequently used actions (b), are used together, the user is confident they can quickly access common actions and see what is in the superset of actions.

4. If the invention is implemented in a product or prototype, include technical details, purpose, disclosure details to others and the date of that implementation.  
[REDACTED]

**\*Critical Questions (Questions 1-8 must be answered in English)**

**\*Question 1**

On what date was the invention workable? 08/19/2002 Please format the date as MM/DD/YYYY  
 (Workable means i.e. when you know that your design will solve the problem)

Yes  
 No

**\*Question 2**

Is there any planned or actual publication or disclosure of your invention to anyone outside IBM?

If yes, Enter the name of each publication or patent and the date published below.

Publication/Patent:

Date Published or Issued:

Yes  
 No

Are you aware of any publications, products or patents that relate to this invention?

If yes, Enter the name of each publication or patent and the date published below.

Publication/Patent:

Date Published or Issued:

Yes  
 No

**\*Question 3**

Has the subject matter of the invention or a product incorporating the invention been sold, used internally in manufacturing, announced for sale, or included in a proposal?

Is a sale, use in manufacturing, product announcement, or proposal planned?

Yes  
 No

If Yes, identify the product if known and indicate the date or planned date of sale, announcements, or proposal and to whom the sale, announcement or proposal has been or will be made.

Product: Tivoli Business Systems Manager  
 Version/Release: 3.x  
 Code Name:

Yes  
 No

Date: Currently Unknown

To Whom:

If more than one, use cut and paste and append as necessary in the field provided.

**\*Question 4** Yes No

Was the subject matter of your invention or a product incorporating your invention used in public, e.g., outside IBM or in the presence of non-IBMers?

If yes, give a date. Please format the date as MM/DD/YYYY

**\*Question 5** Yes No

Have you ever discussed your invention with others not employed at IBM?

If yes, identify individuals and date discussed. Fill in the text area with the following information, the names of the individuals, the employer, date discussed, under CDA, and CDA #.

**\*Question 6** Yes No Not sure

Was the invention, in any way, started or developed under a government contract or project?

If Yes, enter the contract number

**\*Question 7** Yes No Not Sure

Was the invention made in the course of any alliance, joint development or other contract activities?

If Yes, enter the following:

Name of Alliance, Contractor or Joint Developer

Contract ID number

Relationship contact name

Relationship contact E-mail

Relationship contact phone

**\*Question 8** Yes No

Have you, or any of the other inventors, submitted this same invention disclosure or similar invention disclosure previously?

If Yes, please provide disclosure number below:

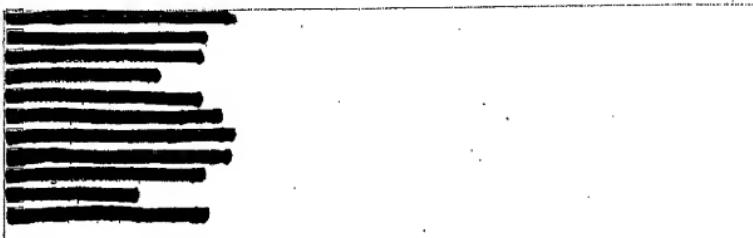
**\*Question 9** Yes No

Are you, or any of the other inventors, aware of any related inventions disclosures submitted by anyone in IBM previously?

If Yes, please provide the docket or disclosure number or any other identifying information below:

**Question 10**

What type of companies do you expect to compete with Inventions of this type? Check all that apply.



**Question 11**

If the invention relates to a product or service that is outside the scope of your business unit, please recommend IBM business unit(s), IBM location(s) or individual(s) within IBM that you think would provide a good evaluation of your invention:

**Patent Value Tool (Optional - this may be used by the inventor and attorney to assist with the eval)**  
(The Patent Value tool can be used by the Inventor(s) to determine the potential licensing value of your invention.)

**Market**

What is the anticipated annual market size (in dollars) that will be captured by your invention?

**CLAIMS**

Question 1 - How new is the technical field?

Question 2 - How central is the invention to the product(s) which might be expected to contain the invention?

Question 3 - What is the scope of the claim?

**PORTFOLIO NEED**

What are the portfolio needs in the area of your invention?

**EXPLOITATION & ENFORCEMENT**

Question 1 - How easily can the use of the invention by a competitor be detected?

Question 2 - How easily can the use of the invention be avoided by a competitor?

**BUSINESS VALUE**

Question 1 - What percentage of the companies producing products in the field of this invention might use this invention?

Question 2 - What is the value of this patent to current or anticipated Alliance Activity between IBM and other companies?

**Question 3 - What is the value of this patent to current or anticipated Technology Transfer Activity between IBM and other companies?**

**Question 4 - Does it result in prestige to IBM?**

**Post Disclosure Text & Drawings**

Enter any additional information relating to this disclosure below:

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(Form Revised 12/17/87)